5-2010

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCESECEIVEDORM 2
Minerals & Mining Program - Oil & Gas Section
2050 West Main, Suite #1, Rapid City, SD 57702-2493
Telephone: 605-394-2229, FAX: 605-394-5317

MAY 2 0 2010

DEPT OF ENVIRONMENT & NATURAL **RESOURCES - RAPID CITY**

PLICATION FOR PERMIT TO DRILL

Type of Work: X Drilk New Well						
Name and Address of Operator Telephone						
LUFF EXPLORATION COMPANY, 1580 LINCOLN STREET, SUITE 850, DENVER, CO 80203 (303) 861-2468						
Name and Address of Surface Owner						
State of SD School & Public Lands, 500 E. Capital Ave., Pierre, SD 57501						
Name and Address of Drilling Contractor and Rig Number:						
Vertical: Ensign Drilling Inc., 1700 Broadway, Suite 777, Denver, CO 80290, Rig # 71						
Horizontal: Key Energy Services, Inc., 115 34th Street West, Williston, ND 58801, Rig # 233						
Surface Location of Well: Qtr-Qtr, Sec, Twp, Rge, County, Feet from Nearest Lines of section, and latitude and longitude (if available):						
SENE, Sec. 25, T23N, R3E, Harding Cty, 1970' FNL x 600' FEL; Lat: 45° 55' 49.67", Long: 103° 41' 18.91"						
If Directional, top of pay and bottom hole location from nearest lines of section:						
Southwest Lateral: Top of pay est @ 9,011' MD = 8,949 TVD; BHL @ 500' FSL & 2,140' FEL Sec 25-T23N-R3E						
Northeast Lateral: Top of pay est @ 9,018' MD = 8,949 TVD; BHL @ 500' FNL & 2,061' FWL Sec 30-T23N-R4E						
Acres in Spacing (Drilling) Unit Description of Spacing Unit						
Approximately 480 Acres E/2 Sec. 25 T23N R3E & NW/4 Sec. 30 T23N R4E						
Well Name and Number		Elevation	Field and Pool, or Wildcat		Proposed Depth and Formation	
State H-25H		3079' Graded	Table Mountain Field		SW = 12,103'MD, 8,949'TVD, RR "B"	
		3095' KB			NE = 11,938'MD, 8,949'TVD,	
Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (an		Depth
1) 12-1/4"	8-5/8"	24# & 32#	2,000'	355 sks Lite tailed w		Surface 6,500'
2) 7-7/8" 3)	5-1/2"	17# & 23#	9,200'		ite tailed with 165 sks Premium ite tailed with 195 sks Premium	4,200'
4) 4-1/2"	None		12,103' MD	None None	ne tanca with 199 sks 1 termum	7,200
Describe Proposed Operations (Clearly State all Pertinent Details, and Give Pertinent Dates, Including Estimated Date of Starting any Proposed Work).						
Use Additional Page(s) if appropriate.						
Drill a vertical well and case, then drill two short radius horizontal laterals in the Red River 'B" formation: Drill 12-1/4" surface hole to approximately						
2,000' with fresh water. Run 8-5/8" casing and cement to surface. Drill 7-7/8" vertical hole to TD at approximately 9,200'. Vertical section to be						
drilled with invert oil mud. Run DST's as needed. Run logs. Run 5-1/2"casing and cement to 4,200'. Set whipstock at approximately 209 degree						
azimuth and mill Southwest lateral window approximately 8,835'-8,841'. Drill 4-1/2" Southwest lateral build section approximately 8,841'-9,011'MD =						
8,949'TVD with a BHL approximately 95' south and 52' west of surface location. Drill 4-1/2" Southwest horizontal lateral in the Red River "B" zone to						
approximately 12,103' MD = 8,949' TVD at BHL approximately 500' FSL and 2,140' FEL Sec 25-T23N-R3E. Set whipstock at approximately 61						
degree azimuth and mill Northeast lateral window approximately 8,823'-8,829'. Drill 4-1/2" Northeast lateral build section approximately 8,829'-						
9,018'MD = 8,949'TVD with a BHL approximately 58' north and 105' east of surface location. Drill 4-1/2" Northeast horizontal lateral in Red River						
"B" zone to approximately 11,938'MD = 8,949'TVD at BHL approximately 500' FNL and 2,061' FWL Sec 30-T23N-R4E. Horizontal laterals to be						
drilled with fresh water/polymer. All drilling fluids and cuttings will be contained in a pit lined with a 12 mil plastic. All liquids will be disposed of in						
an approved method, the liner and cuttings will be buried in place. The estimated start date for location construction is 6/1/10. Estimated start date for						
drilling is 7/15/10.						
I hereby certify that the foregoing as to any work or operation performed is a true and correct report of such work or operation.						
Bill Organ Drilling Consultant 5/17/10						
	gnature	Name (Prin	nt)	Title		
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FOR OFFICE USE ONLY						
Approved by: Title: Oil and Gas Supervisor						
, v—	.973	API No. 40 06	3 20709	Date Issue		
Conditions, if any, on attached page.						